



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/605,040      | 06/27/2000  | David Black          | E0295/7120          | 6450             |

7590 02/03/2004

Matthew B Lowrie  
Wolf Greenfield & Sacks P C  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, MA 01720

|          |
|----------|
| EXAMINER |
|----------|

GECKIL, MEHMET B

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2142

DATE MAILED: 02/03/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/605,040

Applicant(s)

BLACK, DAVID

Examin r

Mehmet B. Geckil

Art Unit

2142

-- Th MAILING DATE of this communication appears on the cover she t with the correspond nce addr ss --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 6.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

1. Claims 1-35 are presented for examination.
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-19, drawn to a user accessing to a logical volume including the user particulars, volume particulars, verification particulars as well as ELVID corresponding to network address format particulars, classified in class 711, subclass 100.
  - II. Claims 20-35, drawn to method of accessing a logical volume including interface module, access management module and mapping and assignment particulars, classified in class 709, subclasses 225 and 245.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as it is usable by any system with a user accessing to a logical volume including the user particulars, volume particulars, verification particulars as well as ELVID corresponding to network address format particulars wherein the first invention lacked features of the second group of claims, e.g., accessing a logical volume including interface module, access management module and mapping and assignment particulars, classified in class 709, subclasses 225 and 245. See MPEP § 806.05(d).

Invention II has separate utility such as it is usable by any system which lacked features of group I of claims, e.g., a user accessing to a logical volume including the user particulars, volume particulars, verification particulars as well as ELVID corresponding to network address format particulars, classified in class 711, subclass 100.

4. Because these inventions are distinct for the reasons given above and because the search required for each group is different and not co-extensive for examination purpose because these groups would require different searches on PTO's classification class and subclass e.g.

a) the Group I search (1-19) would require use of search classified in Class 711, subclass 100 (which would not required for the Group II);

b) the Group II search (claims 20-35) would require use of search Class 709, subclasses 225 and 245, (which would not be required for the Group I, therefore restriction for examination purposes as indicated is proper.

5. In a telephone interview on 1/21/04 with attorney Richard Giunta, the attorney elected to prosecute group II, e.g., claims 20-35 without traverse. Applicant should cancel the non-elected claims 1-19 in response to this office action.

6. Claims 1-35 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite because of the following :

i) Claims 20-26 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: it is not understood who/what is/are performing the claimed steps of method claims 20-26, i.e. the computer operator, the programmer or the programmed steps (Applicant may overcome this portion of the rejection by inserting the phrase ("computer implemented method ...comprising the computer implemented steps of:") into the preamble of the method claims;

ii) the following claim language is not clear:

b) "ELVID" acronyms in claims 20-35 should accompany a definition of the acronym.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBrearty et al (6,216,211) in view of well known distributed mirroring techniques.

9. McBrearty et al taught the invention substantially as claimed including a computer system for accessing logical volumes (LV) stored at least one of a plurality of storage elements wherein the system comprised of a logical volume manager (LVM) which managed a plurality of LVs and determined identifiers (IDs) for the LVs, e.g. see figures 1-2, column 1, lines 42-67 and columns 4-5, especially col 5, line 12 et seq where it stated that LVs are identified by their minor numbers. The system further used the logical volume identifiers (LVID) to access the logical volume (col 5, line 22 et seq.) It would have been obvious to one of ordinary skill in the networking art at the time of the invention that the claimed invention differed from the teachings of McBrearty et al only by a degree, e.g. the claimed ELVIDs. But this is no more than a difference in a degree because the specification defines the ELVID as enterprise logical volume identifier. The "E" in ELVID standing for enterprise but this definition of enterprise is broad and changes from person to person who defines it. Examiner taking in a context of networking interprets that it would be equivalent to storage devices distributed around a network instead of storage devices connected to a single computer system. The issue then becomes how to identify and address to each storage device that is distributed around the network. McBrearty et al taught a mirrored system, see figure 2. It is well known to have systems mirrored at different sites for data recovery (col 1, line 29 et seq) and these are distributed systems and McBrearty et al system would identify the mirror sites and storage devices there and perform I/O operations through the LVs

and LVIDs to have better data integrity in case of data loss at the primary site. Other claimed elements are all obvious variations of the well known features of distributed networking and storage systems. It is well known to map and translate ELVIDs, e.g., see McBrearty et al column 5, line 35 et seq teaching translations, and again at column 5, line 47 et seq teaching a user interface for managing, defining LVs and assigning IDs. The claimed database operations are well known to those one skill in the networking art as data stored in a file and read from the file, e.g., in a Unix or Linux operating system. For example, the Linux operating system under the root directory system includes an /etc sub-directory system for storing networking and other configuration information in various data files. These data files are referred to those one skill in the networking art as databases. These databases are used for managing the networking operations. For example, /etc/host database stores IP numbers of the assigned computers and corresponding fully qualified domain names for these computers for mapping. Applicant's using databases to assign ELVIDs and mapping and translating are obvious variations of these well known networking features. Also, claimed storage management controller in claim 31 is no more than a naming convention because the operations referred to therein is performed by McBrearty et al system.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li et al (6,151,685) taught using LVIDs along with LSA and Segment Directory to manage to access LVs that are distributed around the network at multi-nodes (see col 5, line 24 et seq).

Carter et al (6,026,474) taught storing data at the devices distributed around the network, see figure 8, "Global Ram Directory and remote requests and figure 11, "Global Address' as well as Interface, Directory Manager and all that.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehmet Geckil whose telephone number is (703) 305-9676. The examiner can normally be reached on Monday through Friday from 6:30 A.M. to 3:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Jack Harvey, can be reached on (703) 305-9705. The fax phone numbers for the organization where this application or proceeding is assigned are listed hereinbelow.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800/4700. Customer service number is (703) 306-5631.

**Any response to this action should be mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to:**

(703) 872-9306



Application/Control Number: 09/605,040

Page 8

Art Unit: 2142

Hand-delivered responses should be brought to Crystal Park II, 2021  
Crystal Drive, Arlington. VA., Fourth Floor (Receptionist).

1/22/04

**MEHMET B. GECKIL  
PRIMARY EXAMINER**

*Mehmet Geckil*